

REMARKS

The disclosure is objected to because of certain informalities (Office action at § 2). Applicant has amended the specification to address the informalities. Applicant respectfully requests, therefore, that the objection to the disclosure be removed.

After entry of the foregoing amendments, claims 2-5 and 7-19 will be pending in the application. Claims 2, 12, and 19 are independent claims.

Claim 2 is objected to because the term “substrate” lacks antecedent basis (Office action at § 3). Applicant respectfully submits that the objection to claim 2 is moot in view of the foregoing amendment. Applicant respectfully requests, therefore, that the objection to claim 2 be removed.

Claims 2 and 6-11 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. patent 6,242,984 (“Stones”). Claims 2-19 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. patent 4,562,409 (“Saito”) in view of U.S. patent 4,590,446 (“Hsu”). Applicant respectfully submits that the rejections of claims 2-19 are moot in view of the foregoing amendment.

Applicant has amended the independent claims to explicitly recite *monopole* antennas disposed at the center of the base and at peripheral ends of the waveguides. None of the cited references discloses a monopole antenna disposed at the center of a base of a radial divider/combiner as claimed. By contrast, both Saito and Hsu disclose T-shaped antennas at the centers of their devices (see Saito Fig. 8, for example; Hsu Fig. 1). Stones discloses a so-called “shorted stub” connected to ground (col. 3, ll. 50-60).

Likewise, none of the cited references discloses monopole antennas disposed at the periphery of a radial divider/ combiner as claimed. By contrast, Stones discloses “waveguide to microstrip transitions” (Office action at § 5, citing Stones at col. 4, ll. 61-64). Saito discloses MIC antennas or coaxial antennas (Office action at § 7, citing Saito at col. 7, ll. 2-15). Neither reference discloses that the antennas are monopole antennas. Accordingly, Applicant respectfully submits that the independent claims patentably define over the teachings of the cited references.

Applicant has further amended independent claim 2 to recite waveguides that comprise respective grooves in the base. The grooves are adapted to carry signals between

the first antenna and the second antennas. Adjacent waveguides are separated by respective wedge portions defined by the base. Each wedge portion has a pointed vertex at a respective end thereof proximate the center of the base. Applicant respectfully submits that the cited references do not teach or suggest such a non-resonant structure.

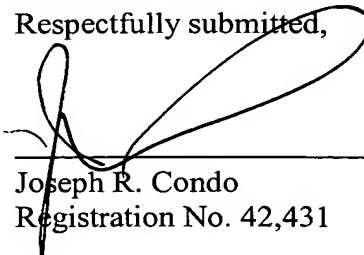
Stones does not disclose waveguides that comprise grooves in the base, where the grooves are adapted to carry signals between the first antenna and the second antennas.

Saito explicitly teaches a cavity resonator. Unlike the claimed invention, adjacent waveguides in the Saito device are separated by structures that create a circular magnetic field MF_1 (as indicated in FIG. 3). The waveguides are not separated by wedge-shaped portions of the pointed vertex at a respective end thereof proximate the center of the base, as recited in Applicant's claim 2.

Further, there would be no motivation to modify the Saito device to separate adjacent waveguides by wedge-shaped portions having pointed vertexes at respective ends thereof proximate the center of the base. Such pointed vertexes tend to create a non-resonant structure. Applicant respectfully submits that the cited references do not teach or suggest such a non-resonant structure. To the contrary, Saito is explicitly designed as a cavity resonator.

For all the foregoing reasons, Applicant respectfully submits that claims 2-5 and 7-19 patentably define over the combined teachings of the cited references. A Notice of Allowance for claims 2-5 and 7-19 is respectfully requested.

Respectfully submitted,



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